CHAPTER 2

REVIEW OF LITERATURE

The available literature on the topic was reviewed in details and is presented briefly in this chapter.

2.1 Raw Cotton

According to Bell et al. (1989), cotton plays a major role in the economies of many developing countries. For example, in India over 60 million people derive income from the cotton/textile sector.

Kumar (1997) in his article revealed the importance of cotton and thus attempted to promote cotton among other cash crops.

Santhanam and Sundaram (1997) found that India had contributed in the global cotton statistics with the largest cropped area of 8.9 million in 1996-97 producing the widest range of cotton fibre quality suitable for spinning 6’s to 120’s counts yarn. It thus supported the largest agro-based national industry of the country.

Punj (2000) mentioned that around the world, more toxic insecticides are used on cotton than any other crop. In this regard he suggested certified organic cultivation as a sustainable alternative. The farmers have an opportunity to convert their production into a controlled organic cultivation.

Roberson (2000) mentioned that organic cotton farming can be a viable option to improve income and reduce vulnerability of smallholders in the tropics.

Adger et al. (2001) analyzed the narratives of four global environmental issues which have many similarities with the issue of Bt Cotton in India. These environmental issues are deforestation, desertification, biodiversity and climate change. They identified two opposing discourses. The first one was techno centric solutions supposedly in the best interests of the poor in the developing world. Second one was the populist discourse which views neocolonial interventions as environmentally damaging and disastrous for developing world livelihoods, in the way that indigenous knowledge is apparently erased through changes in the social and economic structures of societies.
Jewitt (2002) made her research in the Indian state of Jharkhand. She reported that farmers utilized commercial hybrid seeds and traditional varieties in conjunction with modern forms of irrigation technology in order to minimize risk from the uncertainties of both the socio-economic and physical environment.

Glover and Newell, Shiva and Jafri, Orton (2003); Sharma (2004) expressed that in both the developing and developed world farmers are being compelled to adopt transgenic crops, even though the poorest are effectively prohibited from even experimenting with Bt cotton, given its cost. In addition to this economic reality, there is strong evidence that farmers in the developing world adopted new technology.

Sahai and Rahman (2003 2004); Qayum and Sakkhari (2003 2004) revealed that within India there exists significant contention over the utility of Bt cotton for smallholder farmers, with claims and counter-claims resting on the status of the organizations conducting the research.

Qaim (2003) in his article based on field trial data claimed that Bt cotton was responsible for a yield increase of 80% in a year of high pest pressure as well as significant reductions in pesticide use. He believed that Bt technology could change farmers’ non-optimal spraying behavior as well as tackling bollworms.

According to Hegde et al (2004), most consumers prefer cotton personal care items to those containing synthetic fibres. With the introduction of Bt technology, it was possible to produce more cotton fibre, which resulted in big changes in the spinning and weaving industry.

Yang et al. (2005) established that the performance of Bt cotton was a relatively unimportant factor in improving farm level productivity or producing beneficial effects on pest populations, when compared to other interventions. Their paper emphasized the potential value of Integrated Pest Management and farmer education strategies in making Bt technology work better.

Giovannucci (2005) mentioned that one of the requirements of organic farming is that off-farm inputs (fertilizers and pesticides) and inputs produced on the farm (e.g. compost, botanical pesticides) should be substituted by management practices (e.g. intercropping, crop rotation). Due to the more
laborious preparation and application of organic manures higher labour input is required.

Ruivenkamp (2005); Shah (2008) raised concerns about a range of issues besides the technical performance of Bt crops. These issues are ownership and access, equity and the distribution of benefits and costs as well as environmental sustainability and risks.

Wang et al. (2006, 2008) concluded that in the absence of adequate education and training Bt cotton is not well adapted to the management capacities of smallholder farmers or suited to the dynamic agricultural systems and it may only aggravate problems associated with poverty and scarcity.

Frisvold and Reeves (2007) made a multi-region computable general equilibrium (CGE) model to assess the impacts of international Bt cotton adoption on cotton and related sectors of regional economies. From the model it was found that increased production from Bt cotton adoption leads to a 3% reduction in the world cotton price and individual countries obtained greater economic welfare gains if they adopt Bt cotton than if they do not adopt.

Sainath (2007) in his study commented that India has been a major battleground for international disputes over the impacts of Bt cotton. Many farmers in certain districts of two important cotton states, Andhra Pradesh and Maharashtra had experienced poor yields and crop failures after planting Bt cotton.

The Guardian (2007, 2008); The Telegraph (2008) mentioned that numerous signals have indicated that GM crop advocates, policy makers and politicians in the UK to attempt public debate about agricultural biotechnology in the developed world. The benefits of GM agriculture in developing countries will lead to a warmer public appreciation of transgenic crop technology than in the past.

Aggarwal, et al. (2008) revealed that 65 percent of the cotton acreage in India is dependent on rain; the annual variation in monsoon rainfall plays an important role in production and yield for any particular year.

Gruere et al. (2008) in their study found substantial improvements in average yields and overall cotton output for Bt cotton at the aggregate level based on
farm survey data. Other factors such as soil quality, the availability of irrigation, household assets and credit, farmer skill and experience were taken into account. Irrigation has a large effect on yields for both Bt and non-Bt cotton.

Barik (2009) in the study mentioned that cotton accounts for 40% of the total global fibre production and is the most important fibre in the World. India has emerged as the largest exporter in with its surplus output. Cotton covers about 7% of the total Kharif Crop acreage and is second to rice in India. According to Qaim and Sadashivappa (2009) cotton yields have increased on an average by almost 7 percent in the last ten years, but are still considerably lower than world average. The major reasons for this improvement is the increasing usage of high yielding varieties including Bt cotton, improved pest management practices and improved irrigation facilities in some parts of India. Tripp (2009) in his studies mentioned that performance of transgenic crops was different in the developing world. The high degree of variability in outcomes is attributed to socio-economic differentiation in farmers’ capacities to exploit the technology, seasonal variation in terms of risk, especially for poorer farmers and diverse range of technical and institutional factors as well as local agro-ecological, socio-economic, political and institutional factors. Glover (2010) described that the impacts of GM cotton have been mixed, variable, differentiated and agro-ecological, socio-economic and institutional factors. These effects should lead scientists, policy makers and publics to draw conclusions about the actual and potential utility of GM crop technology as a tool for tackling hunger and poverty.

Raja et al. (2010) in their studies declared that cultivation of organic cotton is a sustainable alternative where farmers have a chance to convert their production into a controlled organic cultivation. Organic production systems replenish and maintain soil fertility, reduce the use of toxic and persistent pesticides and fertilizers and build biologically diverse agriculture. Ali et al. (2012) through analysis of Cobb Douglas production function for cotton crop in Pakistan demonstrated that over the time input cost has increased at an increasing rate but return is low from cotton crop. It forces the farmers to search for an alternative crop.
A long term study made by Kathage and Qaim (2012) on the economic impacts of Bt cotton in India, showed that Bt cotton has increased yields, profits, and living standards of smallholder farmers. According to ICAR (2013) Weather condition during 2012-13 was far from normal which led to reduction in 5-6 lakh hectares of area in some cotton growing regions and production by 20-25 lakh bales. The area in Gujarat got significantly reduced from 29.62 to 24.00 lakh, while there was increase in area from 18.79 to 22.69 lakh ha in Andhra Pradesh during the period. Mal and Pandey (2013) used coefficient of variation (CV) and compound growth rate (CGR) in their paper to show instability and growth trend analysis respectively. There is high instability time to time in production and productivity compared to area of cotton. There is remarkable increase in cotton production during 2000-01 to 2010-11. The noteworthy boost in productivity and hence production is attributed to the introduction of Bt cotton in India during 2002.

According to Sood (2013), in India farmers have shown a strong preference for cotton in recent years. In 2012/13, despite competitive prices for alternate crops, drier than average conditions in key cotton growing areas and a late start to the monsoon, farmers planted 11.8 million hectares, well above pre-season expectations.

Mal and Pandey (2014) emphasized in their paper for the cotton availability in the domestic industries rather than its export for generating value addition. This in turn can add more revenue than raw cotton. For this purpose correlation coefficient and multiple correlation is used. The finding showed that during 1991-92 to 2010-11 with increase in cotton production there is increase in cotton consumption by domestic industries and surplus cotton is exported to earn foreign exchange.

2.2 Spinning

Perkins et al. (1984) have explained that little changes have taken place over the past 100 years in the yarn manufacture process. The fibre quality demands yarns with different diameters and weight per unit length for various end uses. Modern machinery can produce higher quality yarn than older systems from similar raw cotton.
Price (1986) pointed out the clear advantages of using finer, mature fibres with improved strength, length and length uniformity since this would give a higher maximum yarn strength with lower twist and also equivalent yarn strength with lower twist, leading to higher productivity.

Izawa1 (1994) stated that cotton price is affected by the influence of world supply and demand. The real and most quantifiable users of cotton are the spinners. Thus by producing the type of cotton that the spinners want, higher prices can be expected and producers will have no difficulty in marketing their product.

Kondo (2001) stated that inspite of being efficient and competitive in the world Indian spinning industry has started deteriorating. Production of cotton yarn per spindle has declined since 1960s. Despite of restriction in cotton export and availability of huge cotton for domestic cotton industry have not contributed to an increase in cotton yarn required for growing market.

Landes et al. (2005) in their report stated that yarn export to the global market is an important source of derived demand for cotton in India. Most of the yarn produced is consumed domestically in weaving sector for value addition.

Grandhi and Crawford (2007) in their paper discussed the price fluctuation in yarn market. Many farmers felt that export of raw cotton would be more lucrative than supplying cotton to domestic spinning mills. Yarn producers argue that this strategy neglects value addition from yarn to fabric production and India will lose revenue by exporting a raw commodity.

Sankar (2010) in the article discussed the importance of spinning industry. Weaving and further value added stage depends on spinning industry. Higher revenue and competitiveness can be enhanced by improving yarn quality.

CRISIL (2011) in their report estimated that revenue of cotton yarn player will increase over the next few quarters due to reduction in input cost and moderate rise in demand.

According to Gherzi (2011) cotton yarn counts to be produced depend on demand and on the amount of raw material available. The cotton yarn market is highly sensitive to shifts in demand for and supply of cotton.

Murugan and et al. (2011) in their paper stressed the fact that alternative method should be searched in current economic slowdown for producing optimum quality yarns at lower cost.
Kotb (2012) stated that cotton finished fabric is highly dependent on the quality of yarn. While choosing cotton yarn cotton fibre properties like length, fineness, strength and elongation should be taken into consideration in order to maintain high level of quality standard.

Guruprasad and Chattopadhyay (2013) in their article stated that India is the major cotton yarn producer and consumer country. It also has the major share in world yarn market. But the weakness of Indian cotton yarn lies in poor fibre strength, impurities and different lot varieties. Technology used for yarn production cannot be utilized at its best level. The raw material cost for yarn accounts for 50 -70 percent.

According to India Rating and Research, (2013) cotton yarn manufacturers get benefit from slow but steady pick-up in domestic demand. Stability in cotton prices will enable spinning mills to better plan the inventory buying. However, spinners in Southern India and Gujarat continue to underutilize capacity due to power shortage or incur high cost of self-generated power.

Antoshak (2014) stated that China is one of the important destinations for India for supplying yarn. Government’s industrial policy of full employment in China compelled the spinning industry to expand unnecessary capacity. China’s weavers depend upon Indian spinning sector. India is specialized in finer quality and it is expanding its export business to China, Bangladesh, Pakistan and Vietnam, particular to china.

Bokhari (2014) pointed out the conflict between spinning and value added sector regarding imposition of custom duty on imports of cotton from India. Spinners are in favour of custom duty as they want preventing dumping of their product from cheaper imports and boosting the yarn market. Value added sectors are against the custom duty on Indian imports as they suppose when global prices is intended to fall local spinners will sell their yarn at higher prices in the local market.

2.3 Weaving

Chorghade (1976) in his research studied the powerloom Industry in Maharashtra and stated that it has a high share in the growth and development of the Powerloom industry.
Ansari (1984) in his research work explained the marketing problems of Powerloom industry in Malegaon City of Nashik District. Dolle (1992) in his research work revealed the socio-economic problems of powerloom industry in Malegaon. He concluded that there are many socio-economic problems in the powerloom industry of Malegaon like scarcity of the finance, marketing problems, labour problems etc.

Seyam (2003) in his paper revealed the fact that role of technology is very important for the progress in weaving industry. When acquiring new technology, the company should consider that there is no fibre damage, capable of producing composite structures, environment friendly, not limited to certain type of fibres and the fastest fabric forming system. It has been observed that development in more versatile process lead to less energy consumption and adopting latest technology lead to increase in annual growth rate in US.

Maatoug et al. (2007) in their paper emphasized that weaving performance is highly correlated with the strength of yarn. Higher the yarn strength higher will be weaving efficiency. To protect yarn from breaking and hairiness size is applied which penetrates into the yarn and provides strength, elasticity, smoothness and enables to gain resistance to abrasion.

Anjum and Thakor (2011) in their analytical study discussed the importance and deficiencies of weaving industry particularly in Malegaon district and Maharashtra in general. Powerloom industry in Maharashtra fulfils the need of the domestic market and it exports to major countries across the world. There are many socio-economic problems like dearth of the adequate, timely and cheap financial facilities, small weaver size, marketing and labour problems, obsolete technology, semi-finished grey cloth and no product diversification, lack of technical training, shortage and high rate electricity, improper working condition and safety measures.

Raaja (2011) mentioned that manufacturing of the weaving products makes a remarkable contribution to the national GDP and even in the exports revenue. The power loom sector produces more than 60 per cent of cloth and the Textile Ministry’s estimation says that more than 60 per cent of the country’s cloth exports originated from that sector.
Bano and Akhtar (2012) in the paper emphasized on cotton weaving sector and stated that supply of raw material to weaving sector on time is crucial to produce finished product. Weaving sector is high technology oriented. Customer demand towards diverse fabric quality requires highly skilled labour to generate efficiency in production. Increase in volume and simultaneous decrease in cost is important to make production competitive.

Kumar et al. (2012) used linear programming based Data Envelopment Analysis (DEA) technique to evaluate relative efficiency of Indian weaving industry. DEA technique helps to understand the factors which contribute for the better performance. In the study it is found that most of the firms covered in the sample vary in scale-size, since investment in plant and machinery is in the range of 1.1-244 crore. With increase in scale of operations labor requirement per loom decreases drastically and hence cost benefits is attained.

Sankaran and Subramaniam (2012) in their paper demonstrated that end use of fabric for apparel and household largely correlated on the weave structure of fabric. Fabric handling, wrinkle recovery, crease resistance, pilling, texture and softness are the important factors to be considered while weaving.

Joy and Kani (2013) mentioned in the paper that due to development in modern machineries handloom weavers are continuously facing stiff competition from powerloom sector due to lack in capital, marketing and managerial skill.

Study carried by Paul (2013) dealt with number of problem faces by the small scale powerloom sector in weaving industry in West Bengal. A large number of powerlooms remained closed due to irregular power supply, lack of spun yarn. Low productivity takes place due to the lack of automatic looms, shortage of finance, tax structures, technically inefficient manpower and poor organizational efficiencies. Government’s ignorance in marketing facilities compelled the sector to dispose products through private channels in the market at unreasonable prices.

PTI (2013) report said that Maharashtra government had come up with proposal to set textile park to assist weavers. Upgradation of technology in powerloom sector and increasing capacity in weaving sector and to provide employment to almost 5000 weavers are the other agenda in this plan.
Rao (2014) in his article clarified that product mix of fabric in domestic and export market and garment sector decides the kind of technology it requires. To become the market leader in weaving government and private participation and upgradation of technology is imperative. With the establishment of textile park and their development approach can reduce the cost by making weaving more competitive.

Sawney et al. (2014) in their report mentioned that globally 75% of the cotton produced annually is used for value added cotton woven fabric. The method of weaving requires sizing to provide strength to the warp yarn and prevent stress during weaving. The process of sizing and desizing is very cumbersome as well as expensive. To reduce the complexities and cost authors have conducted experiment and produced fabric without using sizing in a high speed machine without breakage of yarn. Although the quality of the fabric was not in the agreeable standard but research conducted was admirable.

Umarji (2014) stated that there is high demand of cost effective cap from Aam Aadmi Party. It is a good indication for weavers from Rajkot, Mehsana and Ahmadabad as the party had a conversation with the weavers regarding the supply of caps.

Wadje (2014) mentioned that powerlooms owner who buys yarn, makes fabric in their plant and sells their products earns more revenue than the powerlooms owner doing job works. Small and medium weavers are not aware about the market depending on selling agent to market their produce. As a result agents take away the profit share and weavers do not receive the desirable return.

2.4 Processing

Smith and Rucker (1987) revealed the fact that cost of water for wet processing varies from site to site even for the same process. Some mills have very high water cost.

Cheremisinoff (1995) stated cotton wet processing require use amount of water. Cost of water utilization is 3.5% of the total cost of running the industry. So economical method must be adopted to optimize usage of water and reduce its cost.
Chavan (2001) said that wet processing sector in India is spread throughout the country and in the peripheral of weaving sector. In the entire production chain there are some kinds of environmental hazard but wet processing causes maximum pollution in the environment. Cleanliness and revision of production technology can make textile process ecofriendly.

Bhattacharya et al. (2002) stated that besides quality and productivity, energy is also a big concern. In addition to technical efficiency requirement of economic efficiency is equally or more important. Energy demand and cost depends on the several factors of fabric type, technology used and types of methods. All these factors have to be optimized so as to reach at standard process and sustain quality.

Mehta (2002) in his speech focused on the cost of energy in the textile processing. Enormous cost is incurred in energy either in the form of fuel or electric power during wet textile processing. With prudent investment in plant and machinery and wise decision in choosing the type of fuel can make the textile processing cost effective by saving energy.

Bishop and Smith (2004) stated that wet processing is crucial to make the fabric fit for use. Dyeing and printing is extremely intricate and it requires skilled personnel. Dye selection and method of application depends on the types of fabric and final use of the product.

Adivarekar and Kanoongo (2008) in the article discussed the efficiency required for wet processing in textile industry. Since maximum value addition occurs in wet processing so excessive concentration and capability is needed. Desired quality should be provided through look and feel and at right first time and competitive price. Research and development is indispensable part as customers are getting more demanding and are aware of eco norms.

Parvathi et al. (2009) stressed on the environmental issue and cost saving in textile processing. Textile wet processing involves water, chemical and energy at different stages generates huge wastes. These wastes largely depend on the type of textile facility, the processes and technologies being operated, and the types of fibres and chemicals used. At this stage cleaner production process along with cost saving technology should be implemented in order to save environment and improving fabric quality. This would help to create
reputation in the market and product can be globally recognized for its cleaner technology.

According to Hasani (2010) same unfinished fabric can be transformed to various end use products in terms of aesthetic and utility through different stages of wet processing.

Chalke (2011) addressed that innovation and cost effectiveness is the need of the day. To cut labour cost contract labour is hired. As a result lack of training, low pay scale drives them to perform inefficiently.

Mal (2011) in the report stated that wet processing sector in textile is very important for being huge employment generation. In west Bengal most of these industries are small scale, unorganized, having outdated technology and financial constraint. Since this sector consumes huge amount of water and energy so the sector needs to be technically efficient in order to use water and energy judiciously to make processing cost effective.

Morshed (2011) revealed that new developments are continuously and rapidly taking place in textile wet processing to give shape to market demand. Several challenges stand in the way of wet processing starting from aesthetic to utility, cost effective and eco-friendly. With introduction of new methods and techniques the wet processing should be made economical to withstand in the competition.

Vigneswaran et al. (2011) have discussed that enzymatic treatment is the alternative technology to make the wet processing more sustainable and eco-friendly. Because of specific property enzymes reduces the consumption of water, chemical and energy and minimizes the risk causes to human, wild life and environment.

Chougule and Sonaje (2012) concluded that wet textile process is the consumer of abundant water. Due to several stages in wet processing water gets polluted. It is advisable that used water must be recycled and reused to operate the process economically.

Murugesh and Selvadass (2013) demonstrated that no single stage in wet processing can contribute to the appearance and use of fabric. Each stage has its own significance. Mercerization enhances the colour intake capability within the fabric while dyeing imparts different colour and design to fabric.
making it more attractive. Finishing process softens the fabric and improves fabric feel.

Jadhav and Ajmera (2014) in their article discussed the rising cost in textile. Wet processing consumes 38% of energy consumed in textile industry and record lowest efficiency in energy use. Hence right first time, skilled manpower, maintenance of machine should be today’s requirement to cut cost. Energy loss takes place at several stages of wet processing. These losses have to be eliminated or subsided to become cost effective.

2.5 Apparel and Garment

World Bank (1997) mentioned that cotton garments have a unique place in India’s apparel export.

Spinanger (1999) in his study discussed about the structural changes of major players in textiles after Multi Fibre Agreement. He analyzed the different factors (market share, growth, growth rate, decline, decline rate, values, consumption, consumption rate and production, change in location demand) in clothing and textile at different period of time in different economies. He made comparative study of clothing sector with other important sectors in terms of production, export and impact on economy.

Banik and Bandopadhyay (2000) stated that India predominantly produces cotton-made garments because of higher domestic demand. In India, most of the textile and garment trade takes place through retailers who do not always keep pace with the changing tastes and preferences in the international fashion scene and therefore Indian exports never feature in any major international fashion shows in the EU or in the US.

Shetty (2001) mentioned that India’s low level of technology has contributed to low productivity and deprived the sector from economies of scale benefits. The highly fragmented structure of the apparel sector largely explains incompetency of Indian apparel producers in volume. A limited fabric base and lack of product specialization are major weaknesses of the Indian apparel sector.

Nelliyat (2004) stated that immense damage to the environment caused by the textile industry of Tirupur, suggests that the role that the consumers may
play could be significant in pressurizing the industry to introduce clean technology and demand for ‘pollution –free’ garments.

According to Ananthakrishna (2005), Textiles and clothing items have been significant in India’s export basket, accounting for $13 billion in 2003. In the future, prices will fall to market determined levels and growth will depend on enhanced efficiency. Specifically, in a competitive environment, success will depend on quality, price, delivery schedules and marketing skills.

Bye and LaBat (2005) conducted a survey consisting of both qualitative and quantitative research methods related to product development decision. They concluded that beyond the fit of the garment, design of the garment is also crucial in product development.


Ace Global Private Limited (2009) conducted a market research on Indian apparel and clothing industry. The study concluded that apparel is the second largest retail category in India. Rise in disposable income and strong per capita income have considerably helped the industry to move ahead from a commodity level garment purchasing to a lifestyle or a branded level product.

The study conducted by Grail research (2009) made a comprehensive analysis of the progress of traditional global fashion market and the recent emergence of new countries as fashion hubs. France, Italy, UK, US and Japan are considered under traditional fashion market. South Africa, UAE and India are the top emerging fashion markets on the basis of increase in the number of large fashion events during 2004-2008. Apparel manufacturers are shifting production to low cost Asian countries such as Asia. India is an attracting market for large number of clients.

Rana (2009) stated that demand for organic cotton over the world increases every year, especially in US, Europe. While the West shows an increasing trend towards moving away from fertilizers and chemicals, the Indian consumers don’t buy organic cotton clothes due to unawareness of the benefits of organic products. To develop the domestic market for organic cotton awareness and behavior change are necessary. The fashion industry
survives on the philosophy of ‘Change’. New trends for every season and new clothes for every social event are the norm.

Roy (2009) in his paper mentioned that in the case of garments in India although differences in costs between exported and those produced for the domestic markets do not always match with differences in technology and skill of workers between the two segments. India is looking for mass market where costs and delivery time is important to maintain a reasonable level of quality. An economy of scale is important because higher scale of operation provides the opportunity to reduce per unit costs.

Agrawal (2010) stated that with technological advances and market liberalization, India has emerged in the 21st century as a major player in the world cotton market. India’s strong economic growth over the past decade has greatly expanded the country’s domestic market, leading to increased apparel spending and evolving apparel preferences among Indian consumers.

Joshi and Singh (2010) in their research paper measured TFP (total factor productivity) in the Indian garment-manufacturing firms and suggested measures for the firms to enhance their productivity. The study period is based for the years 2002-2007. The Indian garment industry achieved a moderate average TFP growth rate of 1.7 per cent per annum during the study period. The study revealed that the productivity growth is contributed largely by technical efficiency change rather than by technological change.

According to Panthaki (2010) the Garment Industry of India is of Rs -one trillion industries. About 20% of its woven-garment production by volume enters export markets. The indirect portion helps to sustain the direct production sector in the shape of items associated with the garment industry production including sewing/embroidery thread, buttons, buckles, zippers, metal plates, cardboard sheets, plastic butterflies and packaging material.

Ministry of Textiles (2011) estimated that there are over 75,000 garment units in India, but most of them are small in size and undertake work as contract manufacturers for large exporting firms. In order to improve competitiveness and to increase textile exports India needs to focus on increasing labour productivity/ reducing labour costs, improving the working hours, reducing power cost, reducing transport costs and reducing the VAT (value added tax) rates for apparels. The major concern which might hamper the growth
prospects of the industry is the non-availability of quality and skilled manpower and the inadequacy of training facilities in the country. The Hitavada (2013) mentioned that the present garment exports of China were approximately 10 times more than India. The total size of the Indian apparel industry is around Rs 2,00,000 crore. Out of this, unstitched apparels like dhotis and sarees constitute Rs 50,000 crore. So even if 10% of China exports get diverted to India, Indian apparel could double. Size of the Indian domestic readymade garment industry would double within 5 years due to economic prosperity, simplified government policy, growth in fashion orientation, brand awareness and consumer expectations.

2.6 Home Furnishing

According to Reliance (2007) changing lifestyles, more disposable income, growth in real estate, easy availability of loan, plastic money and the retail boom are driving Indian Consumers on decorating their homes. The domestic home textile market pegged at approximately Rs 10,000 crore. Of this only five per cent belongs to the branded segment and the rest is catered by the decentralized segment. Rai (2008) stated that trade policy, various tariffs in different companies and continuous market developments lead home furnishing sector to enhance efficiency to remain competitive. Home linen market is transferring from unbranded to branded. Home textile is coming up with various eco-friendly products to serve the interest of different market segment. Singh (2008) stated that statistics showing increase in young population in urban area with rising income and rise in working female population acts as driving force to increase in demand for home textile. Use of credit card also forces to spend on fashionable items. Due to high returns people invests in real estate and they are inclined to decorate their house.

Ace Global Private limited (2009) in the research concluded that among all home textile bed and bath linen dominates the market. In value terms they have the two thirds of the market share. The market for bed linen only is 76 billion. Business Standard (2011) reflected rise in income, growth of sectors like housing, office, hospitality and health care are the driving factors for home
furnishing industry. In spite of growth in this sector 90% of the market is still under organized sector. There is vast scope for India to grow in organized sector.

IKEA (2011) provides 9500 product varieties in home furnishing. It ceases the use of those chemicals and substances harmful to human and environment. For more product development IKEA has come up with scorecard consisting of 11 criteria like More from less (using less material in the product), Renewable material, Recycled material, Environmentally better material, Separable and recyclable material, Product quality, Transport efficiency (number of products per container), Energy efficient production, Renewable energy in production, Raw material utilisation at suppliers, Product use (less use of energy and water and less waste in customers' homes).

According to Intertek (2012) National and international standard are imperative as customers are getting more and more penchant towards quality and safety besides lifestyle. Fibre type to flammability resistance is the demand of different countries. Awareness of eco-friendly products propels customer to go for eco textile items which ensures protection of both environment and human.

Chaudhary and Shahid (2012) in the paper stated that rise in disposable income and expansions in real estate have boosted home furnishing industry. Home-tech and furnishing market is predicted to reach at 26,600 crore by 2015. There is immense opportunity for India to operate in the global market by concentrating on high value items through product development. Global Sources (2012) asserted that home furnishing industry in India is improving. Adoption of different manufacturing and marketing approach has increased capability of manufacturer.

Fibre2Fashion.com (2013) in the article considered innovation as an integral part to suit the preferences of varied customers. Innovative home textile products have added wonderful features, increased utility and comfort. Innovative smart carpet counteracts bad odour, easy to clean and durable. Introduction of solar curtain, magnetic curtain and automated curtain have improved the lifestyle of people.

Home Fashion Future (2013) in an article stated that India has wide product varieties but lacks in quality in terms of testing standards. Bangladesh and Sri
Lanka are ahead of India in terms of standard norms and lead times. India faces problems of labour shortage, scarcity of infrastructure and power in home textile. India produces natural fibres and caters to the niche market. Techsci Research (2013) estimated Indian home furnishing market to reach US $ 5.29 billion in terms of value with increase at a compound annual growth rate of 8% over the next five years.

Kukreja (2013) in her report stated that export of handmade cotton floor coverings during 1999-2000 was Rs 4435802 (in 000's), of handmade cotton dishcloth in the same period was Rs 143701 (in 000’s), of handmade cotton table linen was Rs 4150857 (in 000’s), of handmade cotton bed linen was Rs 1369123 (in 000's), and of handmade cotton made-ups was Rs 6319979 (in 000's). With the increasing disposable incomes of the Indians and evolving consumer perception, the home decor industry is fast becoming one of the growing sectors in the country.

Companies and Market.com (2013) in the report mentioned that Indian home furnishing industry is categorized into organized and unorganized sector capturing 6% and 94% of the market share respectively. This industry is in the expansion stage so India is having high scope both nationally and internationally.

National Skill Development Corporation (2014) stated that India is the major player in global home furnishing industry and exported home furnishing products worth Rs. 7400 in 2007-08. Successful key factors in furnishing industry are enhanced productivity, brand building, focusing globally, product innovation and going for international certification.

Retail pro (2014) mentioned that with rapid change in home furnishing industry it is challenging for the retailer to keep pace with the latest fashion. Again profitability is highly related with keeping updated with trend and satisfaction of customer. The problem of inventory is a great issue to decide when to keep large stock and when to release the stock. Optimum productivity is required to maintain cost. For these entire purposes home furnishing retail software solution has been introduced by retail pro to find easy solution.
2.7 Value Addition

Singhal (2004) pointed out that the average manufacturing and delivery lead time from fabric buying to shipment of apparels comes to 45-60 days and in most cases can extend to 80 days. The mean delay in procurement of raw materials for garments and then exporting finished garments from India is estimated to be 15.5 days. Since life of fashion driven products is hardly 45 days, such delays are unacceptable.

Helvetas (2006) mentioned that the textile sector can be characterized not only by its intensive competitive dynamic but also by the significant environmental and social problems linked to the production of conventional cotton. However, linking sustainability issues with strategic competitive advantages is a challenge, as selling eco-textiles beyond a niche requires special competencies in organizing the value chain, cost reduction and implementing green issues in the marketing strategy.

According to Rakshit et al (2007), traditional textiles today are unable to cope with cost of production for various reasons like fast technological obsolescence, high cost of modernization, power, etc. Present product mix of traditional textiles is not remunerative enough and therefore, more and more ideas of value-addition to textile products are gaining momentum.

Central Institute for cotton Research (2010) in their report revealed that Indian textile industry contributes to about 14 % of the industrial production and 4% of the GDP. This sector uses cotton as its major raw material constituting about 62% of the fibre used, unlike the global textile industry that has a mix of 40% cotton and 60% man-made fibre. There exists a value chain for cotton in India. Seed cotton is ginned into lint which is then mechanically processed into yarn and fabric. This is followed by chemical processing and finishing including dyeing or printing and finally converting it to garments and made-ups for both internal consumption and export.

Devaraja (2011) explained the diversity and complexity of Indian textile industry. There is wider application of textile in industry as well as in household. Thus demand of more and more value added product increases day by day.
Venkatachalam and Palanivelu (2010) in their study found that the exporters are more specialized in basic items of garments. Therefore it is recommended that they should focus on value additions such as embroidery, designs, emblems, symbols, logos etc., on the garments which will help them to improve the performance of their business. This value addition will enable the export units to sustain growth momentum and face competitions from exporters of foreign countries.

Ray (2011) stated that textile industry provides one of the most basic needs of people and holds importance, maintaining sustained growth for improving quality of life. It has an image of self-reliant industry with substantial value-addition which forms a major contribution to the country's economy.

### 2.8 Cotton Textile Industry

Ojha (1978) studied the dividend distribution of 51 cotton textiles companies. He analyzed the dividend distribution of the companies on the basis of size, region, ownership group, management pattern and age of the companies.

Goswami (1985) made an analysis of demand and supply in the cotton textile industry. According to him, only the Powerloom sector and the pure spinning units seem to be doing well. Sixty five to seventy percent of composite mills and the entire handloom sector are sick.

Mathur (1993) discussed about personnel management in the cotton textile industry. He explained that for the economic results the management of personnel is very important.

Sabhoo (1993) in his research work explained the problems and prospects of textile industry with special reference on the productivity of large and small scale true by the study of terms of employment of workers in Malegaon.

According to Verma (2000), standards related to health, safety, environment, quality of work life etc. have begun to be actively linked to trade in textile and clothing. The govt. can facilitate adoption of health and safety standards by Indian firms not only in their products but also in their processes as health and safety standards are universal to all human beings. Firms must upgrade technology, and stop treating natural resources as "income". They must be treated as capital.
According to Kundu (2004) for the Indian Economy, the textile industry accounts for 20% of industrial production employing over 15 million people. 30% of India’s export basket consists of textiles and garments, makes it one of the largest contributors. In spite of high capital and power cost, Indian textile and garment sectors strength lies in availability of cotton, lower labour costs, well-educated supervisory staff and ample technical and managerial skills.

Chellasamy and Sumathi (2005) stated that India’s share in global textile exports is only 3% compared to China’s 13.75%. Looking at export shares, Korea (6%) and Taiwan (5.5%) are ahead of India, while Turkey (2.9%) has already caught up and others like Thailand (2.3%) and Indonesia (2%) are not much behind. The reason for this development is the fact that India lags behind these countries in investment levels, technology, quality and logistics. Chandra (2006) discussed the challenges faced by the Indian textile and apparel industry. Global textile supply chains compete on low cost, high quality, accurate delivery and flexibility in variety and volume. Except for spinning, Indian textile industry suffers from the problem of scale. Indian firms are typically smaller than their Chinese or Thai counterparts and there are fewer large firms in India. Some of the Chinese large firms have 1.5 times higher spinning capacity, 1.25 times denim (and 2 times gray fabric) capacity and about 6 times more revenue in garment than their counterparts in India. Statistical process control is needed to reduce lead times and cost.

Textile Outlook International (2007) stated that environmental issues arise at all stages of the textile and apparel supply chain. Expansion of textile production and consumption has contributed to increasing pollution, water shortage, fossil fuel and raw material depletion, and climate change.

Knowledge Bank IIMM (2008) mentioned that although a product may have met all the criteria for an eco-label certification, a manufacturer would go for such certification only if it brings credibility to the claims of the manufacturer regarding the environment-friendliness of his/her ware.

Mehta (2008) revealed that Indian companies like Reliance Industries Ltd., Arvind Mills, Alok Industries Rajasthan Spinning and Weaving Mills, Tirupur Exporters’ Association, Gujarat Garment manufacturers’ Association are all
rolling out environment-friendly textiles not only for exports but also for domestic consumption.

According to Environmental Justice Foundation (2009) Cotton has historically proved difficult to trace, both because it is traded as an international commodity and because the supply chains itself is long and complex, typically having 6/7 players from fibre to retail.

GOTS (2011) revealed that the Global Organic Textile Standard required not only safe, humane working conditions, including regular employment, fair wages and working hours, but specifies that employees cannot be underage or forced labor, and that they have collective bargaining rights.

India in Business (2011) mentioned that Indian textiles industry is extremely varied, capital intensive, sophisticated mill sector. This also provides the industry with the capacity to produce a variety of products suitable to the different market segments, both within and outside the country. It contributes about 14 per cent to the industrial production, 4 per cent to the GDP and 14.42 per cent to the country’s export earnings.

Netscribes (India) Pvt. Ltd. (2011) announced that rising cost of cotton textile will boost the Man-made Fibre market in India. At this stage it is necessary to save cotton industry from viewpoint of employment generation, foreign exchange earnings etc. by adopting different latest technology.